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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,481	12/04/2001	Takatoshi Hamada	325772025700	1084

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[REDACTED] EXAMINER

PHAM, HAI CHI

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2861

DATE MAILED: 05/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/000,481	HAMADA, TAKATOSHI
	Examiner Hai C Pham	Art Unit 2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) _____ is/are rejected.
- 7) Claim(s) 1-14 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 04 December 2001 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to because:

- **Fig. 1**, the reference character “12” (combiner) is misplaced, e.g., not pointing to the right item, as well as the terms used to define the different parts of the drawing are not correctly connected to the right part (e.g., “combiner”, “optical fiber”),
- **Fig. 3**, “lock signal” (twice) should read –clock signal–,
- **Fig. 6**, “lock signal” (twice) should read –clock signal–, and the reference character “4” (video interface) should be pointed to the correct item,
- **Fig. 7**, the wavelength converter “35” should not be part of the drawing in this second embodiment (see specification, paragraph [0051]).

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Art Unit: 2861

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the description: the reference character "11" (optical fiber) is not shown in Fig. 1. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it contains the terms "means" (lines 9 and 10), which should be avoided. Correction is required. See MPEP § 608.01(b).

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

7. The disclosure is objected to because of the following informalities:

- Paragraph [0052], "(time t1)" should read --(time ti)--.

Appropriate correction is required.

8. The disclosure is objected to under 37 CFR 1.71, as being so incomprehensible as to preclude a reasonable search of the prior art by the examiner.

A. For example, the functions of the respective detection position 33 and the photosensor 13 in connection to the generation of the horizontal synchronizing signal as shown in Fig. 9, are not clearly understood based on the teaching of the current disclosure. Certain portion of the disclosure related to the "detection position 33" appears to be misleading in both first and second embodiments, namely:

"...a synchronizing signal is generated by the optical signal used for the horizontal synchronizing signal impinging the specific detection position 33 from the print engine 5 side, and the synchronizing signal (light) is transmitted in the reversed path over the optical fiber 11 to the video controller 3 side." (emphasis added) paragraph [0043] (first embodiment)

it appears that a [horizontal] synchronizing signal, as shown in Fig. 9, is generated by the detection position 33, in response to the optical signal used for the horizontal synchronizing signal, such horizontal synchronizing signal would be different from the incident light of wavelength $\lambda 1$. However, the following passage adds more confusion:

"The light of wavelength λ_1 input to the detection position 33 of the horizontal synchronizing signal is converted to a wavelength λ_2 by a wavelength converter 35", paragraph [0042]

this passage indicates that the incident light of wavelength λ_1 would pass through the detection position 33 without any modification, and then is converted to a wavelength λ_2 by the wavelength converter.

Furthermore, the second embodiment teaches:

"A synchronizing signal is generated when the light reaches the detection position 33", (emphasis added) paragraph [0049]

which again indicates that the [horizontal] synchronizing signal, as shown in Fig. 9, is effectively generated by the detection position 33. However, the following paragraph denies such implication:

"The second embodiment ... differs in that the synchronizing signal (light of wavelength λ_2 is generated by another synchronization laser diode 15", (emphasis added) paragraph [0050]

and

"Since the light emitted from the synchronization laser diode 15 has a wavelength λ_2 which differs from the light of wavelength λ_1 of the raster signal, the light from the

Art Unit: 2861

detection position 33 is input to the combiner 400 without passing through the wavelength converter 35", (emphasis added) paragraph [0051]

by indicating that the incident light of wavelength λ_2 would pass through the detection position 33 without any modification.

In other words, it is not clear whether the detection position 33 acts as a beam detection sensor for detecting the laser light beam reflected from the optical scanner so as to generate a start-to-scan signal (or horizontal synchronizing signal) for the laser diode to start to scan in the main scanning direction or it uses as a light beam catching device so as to redirect the light beam without further modification to the wavelength converter.

In the meantime, the description of the photosensor 13 does not clearly convey how the photosensor would contribute to the operation of the laser diode. The following passage:

"the horizontally synchronizing light transmitted from the print engine 5 is combined by the combiner 12, input to the photosensor 13, and input to the microcomputer 61 after photoelectric conversion in the photosensor 13, and drives the laser diode driver 8 in accordance with the raster data of each single scan", (emphasis added) paragraph [0031]

does not help to clearly convey the basic description of the function of the photosensor 13, e.g., detecting the horizontally synchronizing light sensing so as to generate a [start-

of-scan] signal for the laser diode to start to scan in the main scanning direction or sensing the input light to detect the intensity of the light emitted by the laser diode.

B. There are also conflicting limitations recited in the claims:

- Claim 1 recites “transmitting a synchronizing signal over the optical fiber in response to the detected optical beam”, indicating that the characteristic of the synchronizing signal is different from that of the detected [incident] optical beam.
- Claim 2 recites “a wavelength converting device converting a wavelength of the detect[ed] optical beam” (emphasis added), indicating that the detected [incident] optical beam would pass through the synchronizing device without modification and those wavelength would then be converted by the wavelength converting device, which is disposed after the synchronizing device (per disclosure, Fig. 4). This limitation would be conflicting with the essence of the parent claim 1.
- Claim 3 recites “a wavelength converting device converting a wavelength of the synchronizing signal” (emphasis added), which would conflict with the claimed limitation of claim 2, meaning that either claim 2 or claim 3 would not be supported by the specification.
- Claim 12 recites the following limitation “a wavelength converting device”, which would not be supported by the specification based on the second embodiment.

Therefore,

- Applicant is required to submit an amendment, which clarifies the disclosure so that the examiner may make a proper comparison of the invention with the prior art.
- Applicant is also advised to review the claims based on the clarification of the disclosure, and which would be supported by the disclosure.

Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

A shortened statutory period for reply to this action is set to expire ONE MONTH or THIRTY DAYS, whichever is longer, from the mailing date of this letter.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (703) 308-1281. The examiner can normally be reached on T-F (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin R. Fuller can be reached on (703) 308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722, (703) 308-7724, (703) 308-7382, (703) 305-3431, (703) 305-3432 for regular communications and for After Final communications.

Art Unit: 2861

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



HAI PHAM
PRIMARY EXAMINER

May 6, 2003